BUREAU OF LAND MANAGEMENT

BUTTE FIELD OFFICE NOXIOUS WEED MANAGEMENT

Links to Weed Websites

- Montana State Office
- Butte Field Office
- Montana Weed Control Association
- Montana War on Weeds
- Statewide Noxious Weed Awareness & Education Campaign
- Center for Invasive Plant Management
- Team Leafy Spurge

Weed Contacts

- Weed District Coordinators and County Extension Agents
- Montana BLM Weed Personnel

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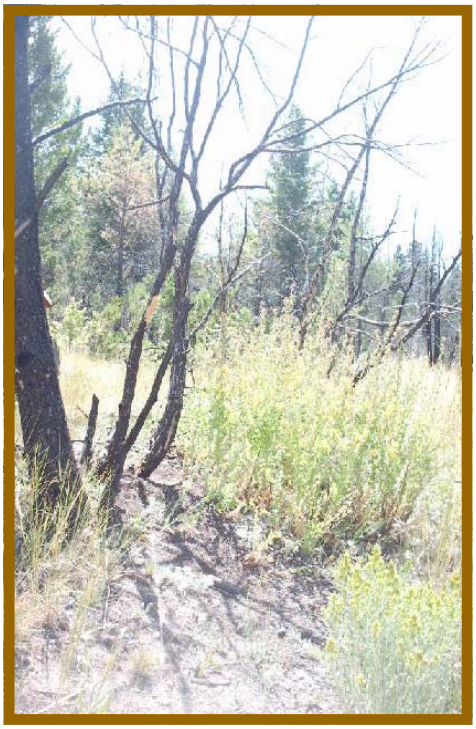

Dalmatian toadflax
(Linaria dalmatice) is pervasive in disturbed area

Biological Wildfire?

"One of the BLM's highest priorities is to promote ecosystem health and one of the greatest obstacles to achieving this goal is the rapid expansion of weeds across public lands."
(http://www.blm.gov/weeds, 07 July 2003)

The Butte Field Office, Bureau of Land Management, (BLM), is committed to supporting cooperative Integrated Weed Management to reduce, eradicate, and prevent weeds. We pride ourselves on being active partners with the communities located in our eight county area, supporting research, and performing quality weed management on our public lands.

Ongoing Butte Field Office Weed Management includes:

- **Chemical Controls**

The Butte Field Office works in cooperative agreements with the counties in our area to control roadside weeds. Our Butte Field Office personnel spray campgrounds, backcountry infestations, and other areas on public lands as needed.

- **Biological Agents**

The Butte Field Office personnel release thousands of biological agents annually on multiple weed species, develop monitoring points at release sites, and monitor sites for insect establishment. We have collected hundreds of thousands of spurge flea beetles annually with the cooperation of BLM - Lewistown, at their Grass Range site. We also receive several releases from community programs as well as other government agencies.

- **Goat/Sheep Grazing**

The Butte Field Office works in cooperation with adjacent private landowners to graze leafy spurge, spotted knapweed, and Dalmatian toadflax in areas where grazing is an appropriate control method.

- **Fire Rehabilitation**

The Butte Field Office is actively involved with weed prevention and control post-fire. An important focus is cooperating with landowners affected by the same fires to develop the most effective weed management for the burned areas.

BUTTE COOPERATIVE EFFORTS

The Butte Field Office is working on some special weed projects in addition to its daily and annual weed management. Many of these projects involve cooperation between the BLM, community programs, other agencies and organizations, and researchers.

High School Projects High School Projects Whitehall, Harrison, Ennis Project (WHE)

Whitehall, Harrison, Ennis Project (WHE)

The Butte Field Office supports and provides grant funding for this effort. The project maintains a knapweed biocontrol agent insectary, monitors and collects from over 500 biocontrol release sites, developed and maintains a weed website (Montana War on Weeds), and promotes weed education in schools among other weed related activities. Project staff consists of one teacher from Whitehall, Harrison, and Ennis working with high school students.

The Butte Field Office annually receives several knapweed and spurge biocontrol releases, such as spurge stem borers (*Oberea erythrocephala*), spurge flea beetles (*Apthona multiple species*), knapweed flower weevils (*Larinus minutus*), and knapweed root boring weevils (*Cephocleonus achates*). Two Butte Field Office employees, John Sandford, Weed Coordinator, and Kirsten Boyle, Student Trainee – Natural Resource Specialist (Weeds), also attended WHE's 2004 Summer Class and learned a great deal about biological control collection, release, and monitoring among other topics.

Releasing *Oberea* on spurge infestation
Whitehall and Harrison HS Students

Townsend Bug & Weed Project

The Butte Field Office contracted with Townsend High School Bug and Weed Project to inventory a prospective burn project for weeds using GPS and produce a GIS map to assist in area assessment. Project participants maintain an insectary to provide knapweed biocontrol agents for local landowners including the BLM. The project serves as an educational tool to teach students about business and mapping technology. Participants are assisting with revision of the K-12 science curriculum to include information and projects on weeds and insects.

Townsend Bug & Weed GPS Crew

Bucksnort - After the Fire Committee and Weed Tour

The Butte Field Office personnel are on the "Bucksnort – After the Fire Committee" and are continuing to work with other federal agencies, several counties, and many private landowners to control and eradicate weeds resulting from the Bucksnort fire in 2000. The Bucksnort burned extensive acreages in Lewis and Clark and Broadwater counties to the west of Canyon Ferry Lake. Grants are available for private landowners to assist with post-Bucksnort fire rehabilitation (Contact Larry Hoffman, Lewis and Clark County Extension Agent, acxlh@montana.edu or (406) 447-8346). **Floyd Thompson, a Range Conservationist with the Butte Field Office,** gave presentations on post-fire reclamation, revegetation, and erosion control efforts at the Bucksnort After the Fire Weed Tour in June, 2004.

Ongoing Cooperative Research Projects

The **Butte Field Office** cooperates and assists researchers on several weed related topics.

Montana State University

Plant Pathology; Nina Zidack

A new biocontrol agent, a bacterial pathogen for houndstongue (*Cynoglossum officinale)*, is being field tested on BLM lands and other areas. **Butte Field Office personnel** are assisting with locating suitable sites, establishing monitoring plots, and monitoring test and control areas.

Entomology; Dave Weaver

Insectary sites for the Dalmatian and yellow toadflax weevil (*Mecinus janthinus*) are being established and monitored on BLM lands and other areas. If the weevils establish successfully, collections for redistribution may be available with two years. **Butte Field Office** is supporting release and monitoring efforts.

Dalmatian toadflax (*Linaria dalmatica*); Jim Jacobs

The effectiveness of chemical treatments on Dalmatian toadflax after wildfire is being researched on BLM lands and other areas. The timing and number of applications, the type(s) of chemicals used, and the minimum gallons/acre for ef fective management are the research's focus. **Butte Field Office personnel** are assisting with locating suitable sites, coordinating weed management efforts, and establishing and reading monitoring plots.

John Santord,
Weed Coordinator/
Range Conservationist

Pete Armstrong
Weed Technician/
Recreation Tech

Sam Little
Weed Technician

Kirsen Boyle and
Melissa Morris
SCEP Weed Specialist
and Range Tech/
Weeds.

All About Weeds

Noxious and invasive weeds are spreading across the western US with large ecological impacts. They threaten native plant communities, the animals that depend on them, water quality, recreational opportunities, and people's livelihoods. They cause degradation of soil functions, such as the water cycle, nutrient cycle, and energy flow, leading to increasing sediments in streams, lower water tables, and depressed soil fertility. Dense infestations promote desertification of the landscape. Land values can decline up to 85 percent from noxious weed infestations as well as reducing rangeland livestock carrying capacity. Moreover, millions are spent annually on herbicides, biocontrol agents, and other treatments to control and prevent the spread of weeds. **Montana,** itself, has millions of acres of invasive weeds, and the numbers are increasing exponentially every year. Total direct and secondary economic impacts of knapweed *exceed $42 million annually (equal to about 581 jobs)* (Lietch, Leistritz, & Bangsund, 1996).

A WEED BY ANY OTHER NAME

- Weed

  A plant growing where you don't want it.

- Invasive Weed

  A weed which originated outside of North America, so it has few, or no, natural controls here.

- Noxious Weed

  An invasive weed defined by Montana law as rendering land unfit for agriculture, livestock, forestry, wildlife, or other beneficial uses or harming native plant communities. There are currently 27 statewide noxious weeds, four new ones in 2003. Individual weed districts can determine additional species to be locally noxious. (Information taken from the Montana County Noxious Weed Control Act (MCS 122-2101 through 7-22-2153)). Some federal government agencies can also select certain species for weed management.

Integrated weed management uses several weed management techniques in a well-planned, coordinated, and organized program to control, eradicate, and prevent the spread of weeds. It involves working with all land owners and users in a team effort to solve weed problems. Two important components are education, one of the strongest methods for preventing the spread of weeds, and monitoring to evaluate effectiveness of control or eradication strategies. A few of the more active attacks on existing problems are:

Biological Controls

Insects, pathogens, nematodes and livestock such as cattle, sheep, and goats

Chemical Controls

Selective combination and application timing of approved herbicides

Cultural Controls

Grazing schedules, crop planting rotations, revegetation

Physical and Mechanical Controls

Hand-pulling, mowing, tilling, hoeing, mulching, and burning

HOW YOU CAN HELP!

Educate yourself about weeds by contacting Statewide Noxious Weed Awareness & Education Campaign, Center for Invasive Weed Management, your local Weed District Coordinator, County Extension Agent, or websites devoted to noxious weeds.

Prevent weed spread by washing the underbody of your car and ATV, brushing horses, dogs, clothing, and boots. Spotted knapweed is spread primarily by vehicles. Houndstongue, a plant toxic to horses and cattle, is usually spread by burrs catching in animal fur or clothing.

Join a weed control association, form a weed prevention group for your neighborhood, encourage a club to sponsor weed education at your local school, or participate in a weed pull day.

REMEMBER

Those pretty flowers may be our greatest threat to our environment and economy.
Working together, the **BLM, Butte Field Office** and **YOU** can control this

Biological Wildfire!

References

Biological Control: Cornell University, http://www.nysaes.cornell.edu/ent/biocontrol
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Center for Invasive Plant Management, http://www.weedcenter.org

Montana Weed Control Association, http://www.mtweed.org

Montana War on Weeds, http://mtwow.org

Montana State University Extension Service, http://extn.msu.montana.edu

USDA-APHIS PPQ Bozeman, MT & USDA-ARS Team Leafy Spurge,
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U.S. Dept. of the Interior; Bureau of Land Management, http://www.blm.gov/nhp/index.htm
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